



Speaking at a recent summit the **Minister of Power and New and Renewable Energy RK Singh** said, “Power demand has increased by 20 percent in the last couple of years. We will cross 50 per cent power capacity from non-fossil fuels well before 2030. We have set an internal target that by 2030, we will have 65 per cent capacity from non-fossil fuels. We are among the fastest growing markets for the renewables in the world. If you look at the total carbon load which accounts for global warming contribution to the total CO2 load till date is just 3.4 per cent and our population is 17.7 per cent. We committed accordingly in COP21 in Paris, that in 2030, 40 per cent of the capacity will come from non-fossil fuels and I am happy to tell you that today we have reached 41.5 per cent of that 9 years in advance.”

“Renewable energy growth is accelerating faster than ever worldwide, supporting the emergence of the new global energy economy. More robust policies and raised climate goals leading into COP26 are driving

renewables to new records, but faster deployment across all key sectors is needed to reach net zero. As per the latest figures, by 2026, global renewable electricity capacity is forecast to rise more than 60 per cent from 2020 to over 4800 GW – equivalent to the current total global power capacity of fossil fuels and nuclear combined,” commented **Kannan Krishnan, Global COO, Jakson Green.**



Puneet Jain, Founder, Natural Battery Technologies, said, “A total of \$14.5 billion was invested in renewable energy, up by 125 per cent compared with the financial year 2020-21 and 72 per cent higher than in the pre-pandemic period of the 2019-20 financial year. To understand the latest on renewable energy in India. Solar, wind, and hydro (small & big) are booming with lucrative scope for investment open in the purview



of New Solar Parks projects, Solar-Wind Hybrid Projects, RE Sector, and Hydrogen Sector. Climate change and the increasing energy demand; reducing reliance on fossil fuel imports and greater resource potential are the directing factors of India’s Renewable Sector. With the rapidly changing landscape, new technologies are emerging in sectors



across industries. Innovation is offering enormous opportunities for the energy sector to provide goods and services while not negatively impacting the environment. Energies are now assisting in the fight against global warming, which is currently a severe environmental problem. As a result of the innovation, India’s green energy sector is pushing progressive growth with a high-end experience.”

“We are seeing a high adoptability trend among all the leading corporates today in meeting and maintaining the carbon neutrality standards. Abiding to the renewable energy plans plays a significant part in this process. This has led to an increased interest among the customers today in the usage and acceptance of energy software control systems, this is where we at Honeywell offer our varied range of end-to-end solutions. Our Battery Energy Storage System Platform integrates Honeywell’s asset monitoring, distributed energy resource management, supervisory control and analytics functionality to enable organizations to accurately forecast and optimize their overall energy use. The Platform leverages best practices for energy management such as energy arbitrage and demand management to deliver flexibility and control of when energy is purchased and used,” said, **Praveen Shetty, Senior Director-Engineering, Honeywell Technology Solutions.**



Swagat Ray, General Manager (PP&D), GMDC quoted, “In 2022, India’s renewable energy sector is expected to boom with a likely investment of US\$ 15 billion this year, as the government focuses on electric vehicles, green hydrogen, and manufacturing of solar equipment. It is expected



Renewable energy growth is accelerating faster than ever



While some of the leading renewable countries have successfully implemented block chain, vehicle to grid, etc, we are at least a decade away from turning this into a national reality, says **KANNAN KRISHNAN**, Global COO, Jakson Green

What are the developments taking place in renewable energy sector?

Renewable energy growth is accelerating faster than ever worldwide, supporting the emergence of the new global energy economy. More robust policies and raised climate goals leading into COP26 are driving renewables to new records, but faster deployment across all key sectors is needed to reach net zero. As per the latest figures, by 2026, global renewable electricity capacity is forecast to rise more than 60% from 2020 to over 4 800 GW – equivalent to the current total global power capacity of fossil fuels and nuclear combined. While China remains the global leader in the volume of capacity additions: it is expected to reach 1200 GW of total wind and solar capacity in 2026 – four years earlier than its current target of 2030.

With some stringent government policy intervention, India is leading on many fronts and would top the charts in its growth rate, doubling new installations compared with 2015-2020. The development of renewables in India is outstanding, supporting the government's newly announced goal of reaching 500 GW of renewable power by 2030 and highlighting India's broader

potential to accelerate its clean energy transition. Regarding other parts of the world, deployments in Europe and the United States are also on track to speed up significantly from the previous five years. These four markets together account for 80% of renewable capacity expansion worldwide.

Do you see a changing mindset and approach among customers regarding the acceptance of usage and preference toward green resources?

Recognising the need to go green is one thing, but going green is different. Now, the world is certainly going green. Considering the grave concerns like climate change, increasing emissions, and high dependence on conventional sources of energy, the world is serious about switching to green. We all know that dependence on traditional sources leads us to lose soil and biodiversity, and of course, the rising tariffs.

Secondly, costs have fallen so dramatically due to positive feedback loops. The more renewable energy technologies are deployed, the cheaper they become due to economies of scale and competitive supply chains, among other factors. We hope that the tax credits and

subsidies, feed-in tariffs, and competitive auctions will help reduce costs and lead to more acceptance.

How are the government's policies benefiting the renewable sector?

Subsidies and other schemes offered by the Government enable us to exploit renewable energy in a more efficient way. However, the Central Government and State Nodal Agencies (SNAs) offer multiple subsidy schemes to the people for the renewable sector. Recently, Government has also announced the PLI scheme allocation in Budget 2022 worth ₹30,000-35,000 crore into solar Photovoltaic cells and modules manufacturing in India, cutting dependence on Chinese imports and bringing the nation closer to achieving 2030 renewable energy targets. Now the governments should be more proactive in recognizing the need to accelerate the green transition. However, creating new green pathways will require long-term commitment, increased investment, continuous innovation and collaboration between government agencies, the private sector, NGOs and civil society

What are the latest innovations taking place in the renewable energy sector?

The renewable energy sector has kept innovating in the last few decades to get to where it is right now. The lowered cost, exponential capacity additions, increased contribution to the energy mix, wide acceptance globally, etc, are testimony to the renewable energy industry that keeps innovating itself in an unparalleled manner. One such Innovation is Advanced Photovoltaics, where there is a possibility to integrate PV systems in all possible surroundings without much land usage. As a result, we are witnessing the concepts like Integrated PV, Floatovoltaics and Agrivoltaics turning into reality. Also, there is constant innovation to make Solar Panels more flexible, efficient, cost-effective, lightweight and environment friendly. These innovations are coupled with photovoltaic designs that enable maximum efficiency and high productivity. Together, they promote sustainability through recycling, minimum resource utilization, and the use of alternate materials.

Your views on ongoing investments and expansion in RE sector

India has added about 50 GW of Solar PV in the last decade, and we have missed the bus of not

having enough domestic manufacturing to capitalize on the demand. With the projected demand and Solar capacity additions planned in India and globally, we should aim to boost our Solar components manufacturing, especially on the PV Modules. India should become a vital manufacturing hub and utilize its advantage of skilled manpower and low-cost labour. Since 2021, there has been a great deal of interest in setting up solar manufacturing in the country, from polysilicon and wafers to cells and modules. Driven by the policies and incentives announced by the government, several companies have announced solar manufacturing. It is estimated that by 2025, there will be about 40 GW of module manufacturing capacity in India, some of it with full or partial upstream integration. If these were not mere announcements and turned into reality, this would make India one of the world's two or three leading solar manufacturers.

Which are the areas and sectors RE players should look for growth in the next few years?

One of the key demand and growth driving factors for the next two decades is the renewable participation in the generation of Hydrogen gas. Hydrogen gas has the highest energy density of all fuels and produces near-zero greenhouse gas emissions (GHG). However, most hydrogen was derived from non-renewable sources in the form of grey and brown hydrogen. In the past decade, renewable energy and fuel cell developments have pushed the shift to green hydrogen. While cleaner, it also struggles with the problems of low energy conversion efficiency of fuel cells and challenges in transportation. However, Green Hydrogen is here to stay and will form a significant demand for renewable energy in the future.

India has always been ambitious on distributed energy sources and its integration with the grid. But most of the capacity additions happened on the utility-scale level, and we have left well behind the leading markets in utilizing the solar potential at the distribution level. While some of the leading renewable countries have successfully implemented block chain, vehicle to grid, etc, we are at least a decade away from turning this into a national reality. With the kind of tech start-ups and our continued dominance in the Software services, this will be a huge prospect ahead for renewables' next phase of growth.

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